1. The cross section below shows a soil profile.

- This soil was formed primarily by:
  1. erosion by glaciers
  2. erosion by running water
  3. capillarity and human activity
  4. weathering and biological activity

2. Humus, which is formed by the decay of plant and animal matter, is important for the formation of most:
   1. soils
   2. minerals
   3. sediment
   4. surface bedrock

3. Which factor has the most influence on the development of soil?
   1. climate
   2. longitude
   3. amount of rounded sediment
   4. slope of the landscape

4. The diagram below shows a soil profile formed in an area of granite bedrock. Four different soil horizons, A, B, C, and D, are shown.

Which soil horizon contains the greatest amount of material formed by biological activity?
   1. A
   2. B
   3. C
   4. D

5. Which substance found in a soil sample collected in an arid region would most likely be absent in a soil sample collected in a humid region?
   1. rock salt
   2. quartz
   3. obsidian
   4. pyroxene

6. The mineral composition of a residual soil is most affected by the:
   1. depth of the water table
   2. elevation of the surface
   3. steepness of hillslopes
   4. type of bedrock material

7. Which factors most directly control the development of soils?
   1. soil particle sizes and method of deposition
   2. bedrock composition and climate characteristics
   3. direction of prevailing winds and storm tracks
   4. earthquake intensity and volcanic activity

8. In which climate would the chemical weathering of limestone occur most rapidly?
   1. cold and dry
   2. cold and humid
   3. warm and dry
   4. warm and humid

9. Which process involves either a physical or chemical breakdown of earth materials?
   1. deposition
   2. sedimentation
   3. weathering
   4. cementing
10. The cross section below shows sedimentary rocks being eroded by water at a waterfall.

The sedimentary rock layers are being weathered and eroded at different rates primarily because the rock layers
(1) formed during different time periods
(2) contain different fossils
(3) have different compositions
(4) are horizontal

11. Which factor has the greatest influence on the weathering rate of Earth’s surface bedrock?
(1) local air pressure
(2) angle of insolation
(3) age of the bedrock
(4) regional climate

12. The photograph below shows an arch of rock located in the western United States.

How did the arch most likely form?
(1) The bedrock in the arch was more resistant to weathering and erosion than the surrounding bedrock that was removed.
(2) An earthquake forced bedrock upward into the shape of an arch.
(3) Sand and gravel were deposited and compacted in the shape of an arch.
(4) An underground glacier tunneled through the bedrock.

13. The diagram below represents a sedimentary rock outcrop.

Which rock layer is the most resistant to weathering?
(1) 1
(2) 2
(3) 3
(4) 4

14. Which long-term atmospheric changes would increase the rate of chemical weathering of surface bedrock?
(1) decreasing temperature and decreasing precipitation
(2) decreasing temperature and increasing precipitation
(3) increasing temperature and decreasing precipitation
(4) increasing temperature and increasing precipitation